Strategic Initiatives 2000 & 2001

Introduction

ODOT has worked in recent years to become more efficient and effective in its use of the public tax dollar. Since the early 1990's the department has increased the size of its annual construction program from $800 million to its current size of $1.2 billion. ODOT has been able to deliver this large of a construction program despite the fact that, through attrition and buy-outs, it has reduced its staff from 7,800 employees to approximately 6,100 employees. Additionally, the department has focused on how better to use its personnel and resources to continually become more effective. These efforts have manifested themselves in annual "Strategic Initiatives."

Each year ODOT creates a list of priorities, upon which the entire department will focus. These efforts, or Strategic Initiatives, are ones that have statewide impact and have the potential for making the department more accessible, customer-friendly and better able to serve our customers. ODOT's Strategic Initiatives also provide direction on mission critical objectives so every employee in the department can remain focused on continuous improvement of the services ODOT provides.

FY 2000 Strategic Initiatives

In order to better understand the significance of ODOT's FY 2001 Strategic Initiatives, it is important to briefly discuss the initiatives the department has focused on in FY 2000. The FY 2000 initiatives have focused on continuous improvement of ODOT's core mission, vision and functions. Summarized briefly, they are:

- **Reaffirm Vision 2000**

ODOT adopted Vision 2000 in 1995 with the intent of making many permanent changes to the department which would make it more efficient, responsive and customer focused. These changes included decentralizing the agency into 12 separate and self-directed districts, creation of the Transportation Review Advisory Council (TRAC) to bring more openness and accountability to the selection of major construction projects, and a commitment to quality through employee training and the formation of quality improvement teams.

This initiative reaffirmed these commitments, despite the changing of gubernatorial administrations.

- **Ensure reliable project delivery processes capable of delivering a $1.2 billion annual program**

This FY 2000 Strategic Initiative has focused on putting in place the production elements needed so transportation stakeholders – local communities, transportation advocacy groups, the construction and design industries, and citizens – can rely on a sustained, and significant annual construction program. The $1.2 billion program size was selected because it is the optimum level that can be achieved by using all available state and federal funds, and without excessive borrowing. This program size also maximizes the amount of infrastructure needs that can be addressed without creating an excessive surge of contract sales which will inflate bid prices.

Ultimately, this initiative focused ODOT on expanding the size of the annual construction program in a predictable and rational manner. These efforts started as a Strategic Initiative, and have become the standard way of doing business at ODOT.

- **Complete a common format for the annual work plan**

With a decentralized work force it is critical that every work unit move in unison. This FY 2000 Strategic Initiative has ensured each ODOT work unit shares a clear set of objectives and a common set of annual goals. Further, it has enabled the department to achieve a consistent format for the anual work plan which includes forecasting future planning, production and highway management needs.

This initiative has meaningfully integrated into the department's existing work processes a common set of benchmarks for ODOT's diverse work force, and a common format for evaluating overall agency success.

The multi-lane system represents only 24 percent of total state lane miles but it carries 52 percent of the total vehicle miles traveled.

- **Adopt a system to forecast multi-lane pavement needs and enact a program to ensure those needs are consistently met**

ODOT has experienced a steady degradation in the multi-lane system since 1986. The amount of deficient multi-lane pavement rose from 10 percent in 1986 to 23 percent in 1998. This FY 2000 Strategic Initiative focused on developing a method to forecast a 10-year strategy for each of Ohio's multi-lane sections of pavement, with the intent of bringing the amount of deficient multi-lane pavement below 10 percent, and maintaining the system at that level in perpetuity.

This initiative is significant because even though the multi-lane system represents only 24 percent of total state lane miles, it carries 52 percent of the total vehicle miles traveled.

- **Implement the use of warranties, innovative materials and innovative contracting techniques to extend the life of Ohio's bridges and pavements, especially on the multi-lane system**

The Ohio General Assembly stipulated ODOT must use warranties on all multi-lane pavement projects by the end of FY 2001. This initiative focused on meeting this directive and established warranties for pavement and bridge work, began utilizing the Design-Build process, and has begun studying how the use of warranties and Design-Build can be expanded.

This FY 2000 Strategic Initiative is significant in that it will lead to longer lasting pavements and bridges, and to better and expanded expenditure of the public tax dollar on transportation infrastructure needs.

- **Become second to none in maintenance of traffic practices**

ODOT's construction program is one of the largest contributors to congestion in Ohio. This FY 2000 Strategic Initiative has focused the department on making every effort possible to mitigate the effect of ODOT's approximately 800 annual construction projects on maintenance of traffic. This initiative has yielded minimum standards for maintenance of traffic, routinized use of accelerated contracts, incentives and disincentives to ensure contractors have good reason to minimize disruption, and established minimum procedures for public information for significant construction projects.

Ultimately, this initiative is significant because it attempts to mitigate one of the largest factors of congestion on Ohio's roadways. Best practices, include more night work and maintaining two lanes of traffic at all times whenever possible.

- **Adopt new design standards to enhance the aesthetic appearance of significant transportation projects**

The role of transportation projects in improving the quality of life for communities across Ohio continues to elicit debate among policy makers and citizens. This FY 2000 ODOT Strategic Initiative has charged the department to make construction projects more compatible with their communities by designing them to compliment the local surroundings. The use of patterns, colors, textures and varying proportions all can make a road, bridge or noisewall much more attractive – at very minimal additional expense.

This initiative has resulted in a review of the state of the art in design and an analysis of what other states are doing to make projects more aesthetically appealing. Further, initial utilization of this practice in several Ohio communities has yielded very positive feedback from citizens and elected officials.

These seven FY 2000 ODOT Strategic Initiatives, in conjunction with more than five years of institutional reform, have established a strong foundation for ODOT as it continues to become more customer focused and value added to Ohio's citizens.

ODOT's FY 2001 Strategic Initiatives seek to further build upon these successful efforts, and continue to identify best practices to be adopted into ODOT's everyday way of conducting business.

ODOT will adopt clear goals to improve conditions on its freeway network.

Ohio's freeway network was conceived in the mid 20th Century. At the start of the 21st Century it is showing its age with a near doubling of deficient pavement conditions arising in the past decade. Ohio's freeway system has surpassed its designers' prediction by carrying more traffic than ever imagined. Ohio's freeways comprise only 24 percent of ODOT's total roadway network but carry 52 percent of all traffic and 85 percent of all truck freight.

Because of a serious decline in pavement conditions, ODOT in FY 2000 adopted a goal to improve the forecasting of future conditions on the multi-lane system. The results of the 2000 initiative indicate ODOT is on track to substantially improve multi-lane conditions by 2004, if an ambitious program of construction projects and preventive maintenance is delivered.

This FY 2001 initiative puts in place a program of projects and preventive maintenance estimated to reduce pavement deficiencies to 9 percent by 2004 on Ohio's multi-lane system. This program also will maintain the bridge conditions on Ohio's Priority System at their current high level.

The proposed FY 2001 initiative takes the results of the 2000 analysis and translates them into an actual program of projects and preventive maintenance treatments. With the FY 2001 initiative, each district will be given specific production goals for delivering a certain number of lane miles of projects and preventive maintenance treatments per year for four years. These projects and treatments will be taken from the district work plan and recent pavement forecasting analysis. The production results will be monitored quarterly to ensure the projects are delivered on time. Each year, pavement condition improvements will be measured to determine if the department is on track to meet the level of system condition improvement desired.

The goal of 9 percent pavement deficiencies was selected because:

- It marks significant improvement from the current 17 percent level of deficiencies.
- It is the level achieved from a realistic and fiscally balanced program of projects.
- It represents significant improvement and provides an acceptable level of service.
- Bridge conditions already were generally good on Ohio's multi-lane system and represent an acceptable level. The goal will be to maintain the bridge inventory overall at today's acceptably high level.

The goals of this initiative will be to:

- **Reverse a decade-long trend of pavement deterioration.**
- **Prepare Ohio's freeway and interstate highway network for the 21st Century.**
- **Measure annually ODOT's success toward achieving this goal.**

Develop and implement a comprehensive strategy for measuring and managing congestion in Ohio.

Congestion is one of the most significant issues ODOT currently faces. Initiative Two's desired outcome is to develop a benchmark for measuring congestion, set short-term and long-term goals to reduce it, and create a four-year plan to achieve the short-term goal.

Congestion in Ohio, especially in the urban areas, continues to increase. With limited funding and increasing highway construction costs, the department must devise a strategy to better manage the existing infrastructure, establish a monitoring system, and apply new methods and technology to minimize the impact of the ever growing traffic volumes.

In most of Ohio's urban areas, interstate and major arterial routes fill daily with commuters. This congestion causes delays for passenger cars and freight movements throughout the state. Until recently, the solution has been to build our way out of congestion instead of focusing on improving the existing system's efficiency.

The multi-lane system in Ohio carries more than 52 percent of the state's total traffic. A successful effort to better manage this system will result in fewer delays, increased safety, lower operating costs for vehicles, as well as cleaner air.

This initiative will be carried out by an ODOT committee, chaired by the assistant director for Planning and Production. The time frame for completion will be 12 to 18 months.

The goals of this initiative will be to:

- **Develop with local officials a short-range and long-range goal for acceptable levels of service for Ohio's urban areas.**
- **Develop a process and system to measure congestion and report the results.**
- **Study congestion mitigation strategies to determine what positive impact each might have on maximizing traffic flow, including:**
  - **Access management**
  - **Application of Intelligent Transportation System Technologies**
  - **Improved incident management**
  - **Public transit capital and operating improvements**
  - **Opportunities to better utilize Ohio's freight rail system**
- **Develop a short-range and long-range plan to implement the various strategies which include clearly defined roles and responsibilities for each level of government. This task will include working with metropolitan planning organizations and local officials to improve practices such as access management and incident management.**

ODOT will adopt a "sufficiency rating" system to measure roadway trends in Ohio.

Initiatives One and Two focus on Ohio's high-volume routes. However, ODOT is also responsible for a rural statewide network that faces increasing traffic volumes as Ohio's population disperses. The department tracks many performance measures for this system such as traffic volumes, pavement conditions, accident rates and bridge conditions. ODOT does not have, however, a uniform composite measure to track changing conditions over time. Many states do have such composite measures and they provide a uniform benchmark to measure system changes.

ODOT will adopt a "sufficiency rating" system to provide a composite index of road conditions on the entire state-controlled system in Ohio. This sufficiency rating will serve as a baseline for measuring over time the condition of at least the following attributes of roadways under ODOT's jurisdiction:

- Pavement conditions
- Bridge conditions
- Geometric adequacy including lane width, shoulder conditions, substandard curvature, intersection sight distance, signing adequacy and pavement markings
- Accident rates

To accomplish this initiative, the assistant director for Planning and Production will develop a charter for a multi-disciplinary ODOT team. This team will be tasked to complete its objectives by June 30, 2001.

The goals of this initiative will be to:

- **Create a database that will allow the department to improve customer service by identifying corridors to be prioritized for continuous improvements to the safety and efficiency of the transportation system.**
- **Use the collected information as the basis for an improved planning process which addresses bridge and pavement conditions, geometric adequacy, and safety.**
- **Enable the department to allocate its resources in a more strategic manner and maximize the return on the dollars invested in roadway improvements in Ohio.**

ODOT will enhance its snow and ice operations with state of the art technology and practices.

An effective snow and ice operation is critical to maintain a safe highway network. ODOT county managers direct this activity and must receive departmental support to incorporate new materials, equipment and technologies. A well-coordinated effort is also needed to achieve the vision of being "second to none in snow and ice control." Current policy establishes desired snow and ice removal levels. This initiative is the next step to provide ODOT forces the equipment and technology to achieve, and improve upon, those goals.

The public depends on highways, cleared of snow and ice, for safe travel and the movement of commerce for the economic benefit of Ohio. State of the art innovations are available and must be researched for potential uniform utility. Furthermore, best practices and innovative ideas from the ODOT work force will accomplish continuous improvements to this activity.

A well-planned and coordinated snow and ice operation addresses multiple issues including: highway types, traffic volumes, weather conditions, material characteristics, equipment capabilities and resource management.

A plan will be developed to deploy pavement sensors statewide, in a cost-effective manner and to provide site-specific information for monitoring highway conditions during storms. Utilizing Intelligent Transportation System principles, pavement condition data will be disseminated through the Ohio Transportation Information System and made available to the public and ODOT to make informed decisions regarding conditions.

Snow and ice routes have been established in each county to reflect treating or plowing strategies. With statewide levels of service for each strategy, it is possible these routes can be optimized to incorporate equipment capabilities, personnel resources, facility location, highway type and travel time. Existing partnering arrangements with local governments will be considered. The best computer software programs will be determined to perform this task in each county.

A well-equipped truck fleet is required to handle snow and ice conditions. Automatic spreader controls assist with uniform material applications. Optional equipment such as temperature devices, Global Positioning System receivers, zero velocity spreaders, front discharge units and under body plows are available to improve operations. A long-range plan is needed to evaluate these options and incorporate additional enhancements into the ODOT truck fleet, and ensure state of the art snow and ice equipment is maintained.

The goals of this initiative will be to:

- **Increase material options for specific conditions.**
- **Make operational decisions utilizing pavement conditions and weather information.**
- **Create specific statewide levels of service.**
- **Formalize a process to equate equipment, facilities and staffing levels for long-range planning.**
- **Update snow and ice manuals to include best practices; and provide training.**

ODOT will renew its commitment to Quality Principles.

ODOT values include several elements based on Quality Principles. These values include Customer Focus, Excellence and Teamwork. In addition, the department's philosophy is to have a quality culture that embraces continuous improvement as fundamental to the way we do business.

The department has made tremendous strides in achieving these values and goals, but more can be done. This initiative is being set forth to improve on what has already been accomplished, and to better measure where Quality improvements are still needed. The department will continue to strive toward the goal of receiving the Ohio Award for Excellence.

The Statewide Quality Steering Committee is responsible for the completion of this initiative. It will, however, involve all levels within ODOT. The target date to complete this initiative is July 1, 2001.

The goals of this initiative will be to:

- **Establish district and division baselines by having an independent assessment of the quality status using criteria for the Ohio Award for Excellence.**
- **Have each district and division develop an implementation plan to address any areas identified in the assessment.**
- **Develop a monitoring system to measure the implementation of the action plan listed above.**
- **Continue to develop and refine the key performance indicators as a measure of the success of ODOT's quality initiatives.**
- **Establish a process to continuously identify training and employee development needs to improve ODOT's performance.**
- **Establish a process for assessing customer input to measure if the department is consistently exceeding expectations.**
- **Develop a communications plan to better publicize the results of the quality initiative, internally and externally.**
- **Develop an objective, quality award recognition program.**
- **Establish an education program to encourage the development of skills in areas which will meet ODOT's future needs, as well as enhance employees' career development.**

ODOT will adopt a comprehensive statewide communication strategy.

ODOT must continually improve its communication to the news media; state, federal and locally elected officials; transportation advocacy, business, and civic groups; and to the general public. The department must continually improve its efforts to efficiently receive communications from all its customers and constituents.

ODOT has improved its business and operational practices through the combined efforts of management and the work force. These efforts have required internal focus and organizational change. It is critical the department ensure its customers are informed about ODOT's progress and where it is heading.

This initiative will be achieved through the collective efforts of the director, assistant directors, Office of Communications and the district deputy directors and public information officers.

Components of this plan include presentations to local organizations, meetings with the media, transportation stakeholders and elected officials, and increasing ODOT's presence at transportation seminars. These activities will be minimum expectations and serve as a foundation upon which to build. Outcomes and performance will be measured. Upon successful completion of this initiative, ODOT will have ensured its stakeholders and customers are well-informed about the progress the department has made and continues to make on behalf of the citizens of the state of Ohio.

The goals of this initiative will be to:

- **Increase positive relationships with ODOT's core customers and stakeholders.**
- **Increase the overall strategic efforts to communicate positive information about ODOT to the media, elected officials, local governments, transportation interest groups/organizations and the general public.**
- **Increase the general awareness of the public and the organizations affected by ODOT of the department's recent improvements and strategic goals for the future.**
- **Build upon the success the department has achieved in becoming second to none in snow and ice removal, maintenance of traffic in construction zones, design aesthetics and other quality of life improvements for Ohioans.**
- **Become more recognizable to the department's core customers and constituents with efficiency in accomplishing the public good and strong stewardship of the public tax dollar.**

ODOT will embrace partnering with contractors to improve quality and to reduce disputes.

Partnering is an agreement among the stakeholders involved in a construction project that outlines responsibility, lines of communication and a commitment to the shared expectation of success by all. The concept of partnering is the next step in ODOT's organizational development. The private sector has embraced partnering for the past decade, and will serve as a model for ODOT. The initiative must be accepted and adopted statewide as a continuous process improvement. There are no jobs too small, nor too large for this approach to work.

To successfully accomplish the department's aggressive schedule for project commitments and better serve ODOT's customers, there is a need to develop a way of doing business, that is inclusive, professional, and where individuals are held accountable. Decisions should be made closest to the issue.

The resources expended on capital construction projects are a large part of ODOT's budget. These funds must be used in the most efficient and effective way possible. Many of the claims and change orders issued during construction projects are the result of poor communications and the lack of timely resolution of differences. The partnering initiative gathers all stakeholders together, early in the project, to establish a protocol for communication through a formal agreement.

In May 2000, industry leaders from construction, flexible pavements, concrete pavements, aggregates, engineering consulting, and the Federal Highway Administration met with ODOT to form this agreement.

A partnering coordinator will be appointed within the Office of Construction Administration, and each district will choose advocates. District projects will be identified for partnering this year with the intent to partner all jobs in the future. Training will occur at all levels of the project administration staff to educate personnel on the initiative. Measurements will be established and tracked to measure success. A report will be prepared by the Central Office partnering coordinator at the end of next fiscal year and recommendations will be made for further implementation by executive leadership.

Partnering is a win-win situation for both ODOT and the construction industry. Heartily supported by the Ohio Contractors Association and other industry groups, it will become standard practice for ODOT. Once partnering is deployed by the Office of Construction Administration, the principles will expand into other areas and processes within the department, such as plan scope development, and project delivery.

The goals of this initiative will be to:

- **Reduce the number of construction claims, and the associated cost savings.**
- **Reduce the number and value of change orders.**
- **Increase value engineering savings.**
- **Complete projects on or before the contract completion date.**
- **Create a positive team culture in the development, construction and administration of ODOT's construction program.**

ODOT will complete the integration of the annual work plan into its processes.

ODOT's development of a multi-year annual work plan has been ongoing for the past four fiscal years. In FY 2000, a standard format was used by all districts to forecast total system bridge and pavement conditions. This process must be integrated into the department's work processes at the state, district and county levels.

ODOT's core business of providing the citizens of Ohio a safe, reliable, efficient and accessible transportation system is dependent upon ODOT's ability to plan, design and construct projects which provide the greatest improvements in safety, reduced congestion, and improve bridge and pavement conditions. The department will continue to develop a statewide work plan that incorporates these goals with the existing district and county work plans.

The result of this initiative will be a planning process which evaluates a variety of projects. It will enable the districts to select projects which meet their annual goals. The work plan will assure the accomplishment of the department-wide goal of a $1.2 billion construction program at a quarterly distribution of 20 percent, 30 percent, 30 percent and 20 percent.

This initiative will include developing manuals, training and a quality assurance process for the annual county work plans and for the four-year and 10-year District Planning and Production Work Plans. This effort will include setting long-term numeric goals for bridge and pavement conditions for each district, to be tracked annually by the work plan.

To accomplish this initiative, the assistant director for Planning and Production will develop a charter for a multi-disciplinary ODOT team. This team will be tasked to complete its goals and objectives by June 30, 2001.

The goals of this initiative will be to:

- **Ensure all employees are informed of their work unit's priorities for the year.**
- **Ensure clear goals and objectives are set for all of ODOT's activities.**
- **Ensure ODOT can measure the results of its efforts.**
- **Ensure ODOT's efforts are focused clearly on tasks which serve the customer and improve the transportation system.**

ODOT will adopt the Design-Build process as an additional project delivery method.

Design-Build ensures a reliable project delivery process that creates a fast-track system where project construction can be initiated concurrent with, or immediately following the detailed design phase.

Design-Build, typically faster than the traditional design-bid-build process, combines the design and construction of a project into one contract. The designing firm and construction contractor become a team, working together on the design and construction phases of a project concurrently. This method can often expedite projects by as much as 50 percent. ODOT will refine the criteria for choosing good Design-Build projects and develop Quality Assurance Reviews.

In ODOT's FY 2000 Strategic Initiatives, there was a departmental commitment to ensure a reliable project delivery process and implement innovative contracting techniques. As part of ODOT's effort to accomplish these goals, the department tested the Design-Build method in several pilot projects, as authorized by the state legislature.

The benefits include encouraging collaboration between the designer and contractor to develop innovative techniques to build the project, industry sharing of knowledge regarding constructability and level of detail required to bid and build a job, and strengthening their appreciation of one another's role. Design-Build is a step toward performance-based construction contract requirements.

After FY 2001, additional legislative authority will be needed to continue the use of Design-Build. The legislature granted ODOT temporary authority to use Design-Build on a two-year trial basis.

Ownership of this initiative will lie within the Office of Construction Administration. This office will develop a training program for the district production departments on administering Design-Build projects.

In cooperation with the major initiative coordinator, this office will also prepare an annual report, describing advantages and disadvantages, and developing methods for the resolution of the negative aspects of Design-Build.

This report will be presented to the legislature. The major initiative coordinator will continue close partnership with construction and design consultant industries to make improvements to Design-Build.

The goals of this initiative will be to:

- **Better understand the policy, and accept it as an alternative project delivery method.**
- **Standardize project selection, contract documents, and bonding/insurance requirements.**
- **Understand and define ODOT's role and responsibility.**
- **Use Design-Build as another reliable tool, not necessarily as a cost saving measure.**

ODOT will develop a modern, customer-friendly project management system.

ODOT will replace the Project Development Management System with a new system known as the Ellis system. Ellis is not an acronym but refers to Ellis Island, the point of entry for immigrants to this country. This management system will serve as the entry point for projects into the ODOT program, hence the name Ellis.

The Ellis Project will have a significant statewide effect on ODOT's core business: delivering the annual transportation program. It will be a customer-driven system, governed by statewide departmental business rules, providing overall program status data for senior leadership and tracking individual project milestones for the districts. The Ellis System will become the common database for all users and systems including the transportation management system, bridge management system and construction management system. Ellis will be designed under the auspices of a project steering committee and developed by DoIT.

The Ellis Project will help the department arrive at a common set of business rules for programming projects. It will be structured to encourage current planning priorities such as multi-lane forecasting, work plan measurement and fiscal balance. It will contain accurate data from which the State Transportation Improvement Plan can be generated with minimal processing and analysis. Ellis will be able to perform "what if" functions and measure the system improvement caused by programmed projects. The data will be regularly updated and will help the department deliver its program on time with the correct mix of projects. This will help ODOT meet its strategic goals of improved safety, pavement and bridge conditions in a fiscally responsible manner.

The Ellis Project will be managed by a steering committee consisting of the deputy directors of the offices of Planning, Production Management, Contract Administration, Finance and Forecasting, and one district deputy director. The deputy director of the offices of Information Technology, Construction Management, and Division of Highway Operations, and the major program coordinators will be invited to attend meetings for input. Meetings will be held bimonthly at Central Office.

All matters involving operation of the current PDMS system, the re-engineering of the project delivery process, and the ultimate programming of the Ellis Project will be under the direct authority of the steering committee. Periodic updates on progress and opportunity for comment will be mandatory. Final decisions of the steering committee will be reached by consensus of the members.

The goal of this initiative will be to:

- **Have a new project management system (Ellis) designed and operational by June 30, 2001.**

Strategic Initiatives 2000 & 2001

Conclusion

ODOT has worked diligently since the publishing of the last State of the Transportation System Report in 1998 to increase its productivity, effectiveness, efficiency and overall value for the citizens of Ohio. The Strategic Initiatives in FY 2000 demonstrated the department's genuine commitment to continuous improvement of its core business and operational functions. ODOT will continue forward and fully integrate FY 2000 initiatives into its every day business practices.

During FY 2001, ODOT will embark upon a new set of Strategic Initiatives to build upon the strong foundation established in FY 2000. Through these new initiatives, the department will continue its innovative and customer driven efforts to be a strong steward of the public tax dollar and a positive contributor to the overall quality of life in Ohio.